Occultatio *Martis* & quarundam Fixarum obſervata *GEDANI*, Anno 1676, die 1. *Sept.* ſt.n. mane, Tubis inprimis 12. & 20. pedum à *Joh. Hevelio.*

DIE 31 Auguſti, *aër omninò nubiloſus, imò circa veſperam pluvius extitit, ſic ut vix ſpes aliqua ſuperfuerit Conjunctionem hanc arctiſſimam Lunæ & Martis obſervandi; nihilominus tamen, cœlo circa mediam noctem undique ſereno, obſervatio hæc notabilis, Lunâ pene dimidiatâ exiſtente, ex voto ſucceſſit; ut non ſolùm* ingreſſum *Martis ſub Lunam exactiſſimè, ſed etiam* egreſſum *ejus omnium optimè animadvertere nobis obtigerit; uti ex appoſita obſervatione liquet. Initium accidit ſecundùm horologium Oſcillatorium, ex altitudinibus Fixarum correctum, horâ 1.35'.42", atque Finis horâ 2.46'.29".* Mars *verò obtectus eſt circa Montem Audum, incedens quaſi per loca Lunæ Paludoſa, per M. Ætnam, infra Inſulam Lesbicam, ſupra Paludem Acheruſiam, ſupra M. Coraceem, per Paludem Mœotidem, & paulò ſupra Inſulam Alopeciam & ipſum Lunæ centrum; ſicque rurſùs ad Lacum majorem occidentalem exiens.*

Si quæras, unde viam itinerariam hanc adeò accuratè mihi determinare licuerit, & quidem ad partem Lunæ obſcuram, ſcias, eò eveniſſe, quod Tubis illis meis præcipuas Maculas Majores in parte Lunæ umbroſâ ſatis diſtinctè deprehendere potuerim; atque ita dilucidè conſpexerim, Martem circa medium ferè Paludis Mœotidis emicuiſſe.

De cætero notandum occurrit, paulò poſt Martis egreſſum, aliam inſuper ſtellulam fixam b, *globo aliàs nondum adſcriptam, vix ad 3' minut. prim. infra Martem verſùs Auſtrum, horâ nimirùm 2.53'.35". exiluiſſe circa Paludes amaras; quam quidem Lunam ſubire haud animadverti: cùm totus in eo fuerim, ut Martis momentum Occultationis præciſè determinarem; atque ſic etiam alteram ſtellulam* c *Lunam appropinquare haud deprehendi, quam poſtea circa Martis exitum horâ ſcilicet 3.42'.20", ad cornu Lunæ inferius ad 4' ferè minut. remotam primùm conſpeximus. Quantum colligere datur ſtellula hæc* c *à Lunâ non omninò tecta eſt, ſed Luna eam ſolummodò quaſi margine ſuo ſtrinxit. Nihilominus ſpectaculum fuit admodùm jucundum, cœlo perquàm ſereno, non*

tantùm ♂Martem prorſus occultatum, nec non alteram ſtellulam itidem planè tectam, ſed pariter alteram ſtellulam limbo Lunæ adeò arctè conjunctam vidiſſe; & quidem circa Lunam à Quadraturâ ultimâ recentem, ejuſque partem obſcuram rurſùs exilientes.

Adhæc plures quidem ſtellulas incognitas circa Lunam conſpeximus; verùm cùm illæ parùm ad hancce obſervationem faciant, eas typo noſtro haud adſcripſimus.

Tabulæ Rudolphinæ quæ nonnunquam evidenter à cœlo diſcrepant, hanc inſignem Martis Occultationem ſatis præciſe indicarunt. Siquidem initium Occultationis vix ad 5 minut. prim. diverſam commonſtrarunt, & in fine, & duratione non niſi ad 3′ ferè minut. anticipando videlicet, aberrarunt.

Occultatio *Martis*, & nonnullarum Fixarum

obſervata

G E D A N I,

Anno 1676, die 1. *Septemb.* ſt.n. mane;

à

Joh. Hevelio.

Temp. ſecund. horol. oſcil. Hor. ′ ″	*Fixarum Nomina.*	*Altitudines.* ° ′ ″	*Temp. ex altit. corr.* Hor. ′ ″	*Animadvertenda.*
1 1 25	Caudæ Cygni.	57 10 0	1 0 24	
1 9 45			1 8 45	☽ *diſtabat ferè tanto interſtitio à limbo* ☽ *lucido, quanto M. Porphyrites in M. Ætna removetur.*
1 36 39			1 35 42	*Mars à Lunâ omninò tectus.*
1 45 25	Caudæ Cygni.	51 17 0	1 44 7	
2 47 54			2 46 29	*Mars emicuit; finis nempe occultationis.*
2 55 0			2 53 35	*Alia ſtellula fixa* b *ſub Marte egreditur.*
3 19 50	Scheat Pegaſi.	45 3 0	3 18 19	*Fixa* c *ad cuſpidem* D *inferiorem obſervata eſt.*
3 43 45			3 42 20	

Martis

Martis à Luna tecti Obſervationes, *Grenovici* habitæ, *Auguſti* 21. 1676. à *J. Flamſtedio*, in eorum gratiam qui differentiæ Meridianorum inveſtigandæ incumbunt; Editori ab eodem communicatæ.

AUguſti 21. *ante meridiem pro correctione horologii hùs limbi Solaris altitudines acceperam:*

Hora horologii.			*Hor. ſupp.*			*Horol. error.*		
h.	′	″	h.	′	″		′	″
8. 04. 31	*alt. limbi* Solis *infer.*	○ 26. 04′	8	09	26	+	4	55
5. 42	. . . .	26. 14	8	10	35	+	4	53
7. 58	. . . .	26. 34	8	12	53	+	4	55
9. 10	. . .	26. 44½	8	14	03	+	4	53
10. 15	. . .	26. 54	8	15	12	+	4	57
17. 15	. . . .	27. 54	8	22	09	+	4	54

Deinde poſt Meridiem, cœlo ſereniſſimo.

Hor. horol.		*Correcta.*	
h. ′ ″	h. ′ ″		
10.45.03	10.49.58.	Mars *à limbo lucido* Lunæ ———	5125=42.08
11.06.11	11.11.05.	*eadem diſtantia* ———	3829=31.29
20.00	24.55.	*Iterum* ———	3007=24.44
35.57	40.52.	*Denuo* ———	1982=16.18
57.31	12.02.26.	♂ *Z. ſive diff. alt. limb. Inf.* ♂ ———	1912= 7.35
		jamque tubo ped. 16. ♂ *à limbo* ———	1158= 5 47
12.05.00	12.09.55.	*Planeta nudis oculis diutius conſpici non potuit.*	
9.44	14.39.	♂ *lux cum lumine Lunæ confuſa* ♂ *Z.*	1185= 9.44
10.03	14.58.	♂ *penitus tectus à cuſpide boreo* ———	3475=17 20
18.38	23.33.	41ª. ♂ *in recta per cuſpides ducta apparuit.*	
20 36	25.31.	41ª. ♂ *à limbo vel cuſpi, Tubo breviori,*	3912=32.10
24.58	29.53.	41ª. ♂ *à cuſpide iterum eodem tubo* ———	3935=32.21
46.00	50.55.	Lunæ *diameter longiori tubo,* ———	5971=29.47
13.04.30	13.09.25.	*Iterum eodem tubo* ———	5973=29.48
10.56	10.51.	Martis *emerſio forſan* 4″ *vel* 5″ *citius.*	
13.29	18.24.	♂ *à cuſpide boreo* ———	3675=18.20
18.15	23.10.	*eadem diſtantia* ———	4035=20.08
22.00	26.55.	Lunæ *altæ* 23° *Tubo longiori diameter*	5988=29,55
39.00	43.55.	Lunæ *diameter breviori tubo* ———	3645=29.58

41ª. ♂ *ſecundum Tychonem locus nunc eſt* ♂ 17. 58′½ *latitudo* 1°. 20′ *Auſtralis; unde cum Lunæ tum Martis locus accuratè deduci poteſt.* See Fig. IV.

Mr.

Mr. Edmund Hally's *Obſervations, concerning the ſame Occultation of* Mars *by the Moon, made at* Oxford, *Anno* 1676. Aug. 21. *P.M.*

Temp. Corr.

h.	′	″			′	″
11.	43.	30	*The center of* Mars *from the Neareſt limb of the Moon,* —— —— —— —— —— ——	719½	= 12.	40
11.	49.	2	*Again,* —— —— —— ——	571	= 10.	3
11.	54.	58	*Again,* —— —— —— ——	409	= 7.	12
12.	3.	25	*The center of Mars from the North Cuſp of* ☽,	1118	= 19.	41
12.	10.	28	*The gibbous part of Mars touched the Moons limb.*			
12.	10.	42	*Mars was wholly covered, being diſtant from the Cuſp,* —— ——	963	= 17.	14
12.	40.	00	At this time a *Halo* encompaſſed the Moon, in whoſe Circumference was *Saturn*, the *Pleiades*, *Capella*, and the following of the foot of *Perſeus.*			
13.	10.	41	*Mars did emerge, I ſuppoſe, his Center.*			
13.	12.	45	*Mars was diſtant from the Northern horn of* ☽,	1018	= 17.	55
13.	31.	10	*Mars paſſed over a point noted in the Teleſcope.*			
13.	33.	15	*The Southern limb of* Ætna *paſſed by the ſame point.*			
13.	34.	00	*The lucid limb paſſed over the ſame point.*			
13.	52.	35	*The Moons diam. obſerved,* 1698 = 30′. 1″. *alt.* ☽ 31°. *circ.*			
13.	57.	52	*Mars from the Northern horn of the Moon,*	2042	= 36.	5
14.	2.	53	*Mars from the Southern horn of the Moon.*	2266	= 40.	3

Having carefully conſidered the Moons Parallaxes in the obſervations of this Occultation at *Dantzick* and *Greenwich*, I find from the *Immerſion* the difference of Meridians between *Greenwich* and *Oxford* 4′. 57″; between *Greenwich* and *Dantzick* 1ʰ. 14′. 50″: By the *Emerſion* the firſt of thoſe differences is found 4′. 59″, the latter 1ʰ. 14′. 41″: which near agreement ſhews the Exactneſs of all the Obſervations.

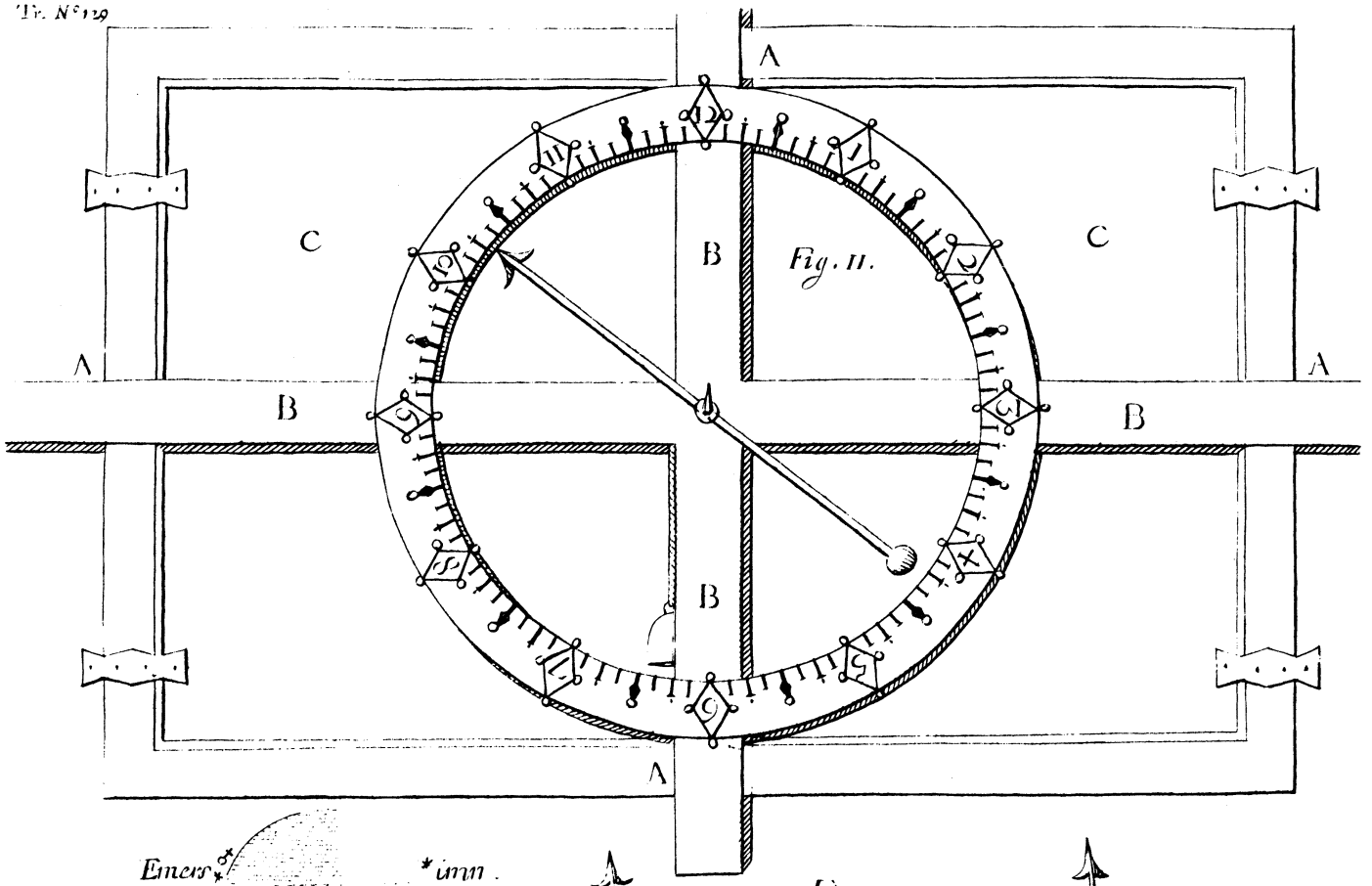
Two Letters written by Mr. John Beaumont *Junior of* Stony-Eaſton *in* Somerſet-ſhire, *concerning Rock-Plants and their growth.*

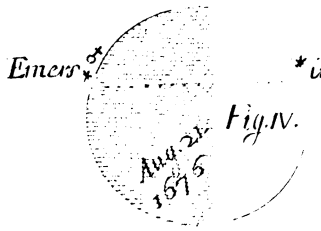
SIR, *The Firſt Letter of* April 7. 1676.

I Lately peruſed the greateſt part of the Philoſophical Tranſactions; in which I received ſo great a ſatisfaction, that I reſolved to gratifie your generous Communications (if I may call it a gratuity) with ſome of the neweſt occurrents I have met with in Nature, which, if as kindly accepted, as freely ſent you, I ſhall readily do the like for the future as far as my ability and obſervations will help me out.

What

Tr. N°129


A
C
B
Fig. II.
C
A
A
B
B
B
A


Emer
imm.
Aug 21
1576
Fig. IV.

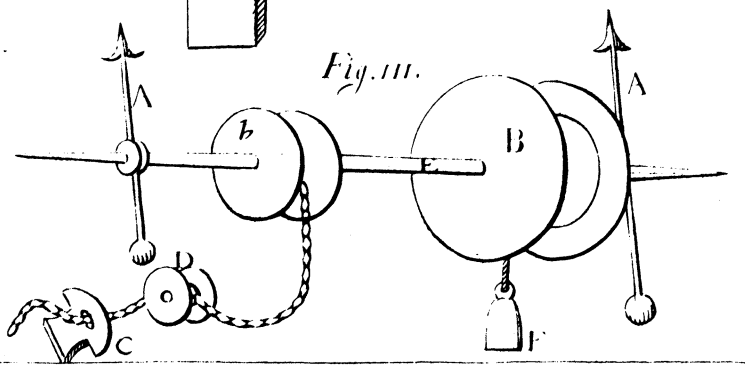
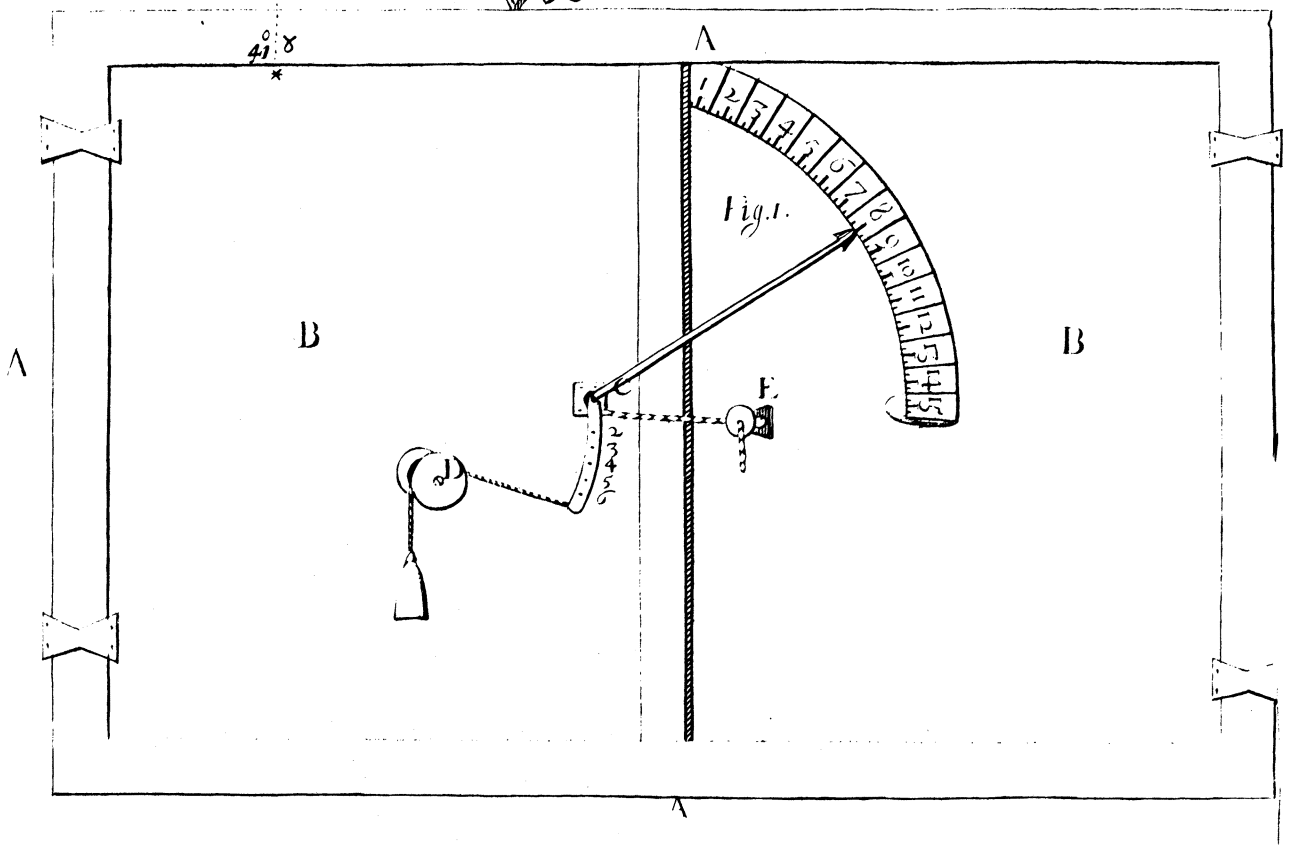


Fig. III.
A
b
B
A
D
C
F


41° 8
A
Fig. I.
B
B
A
E
D
A